



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,384	07/11/2003	Richard L. Coody	P1673US01	5596
22267	7590	06/09/2005	EXAMINER	
CROWE AND DUNLEVY, P.C. 20 NORTH BROADWAY SUITE 1800 OKLAHOMA CITY, OK 73102-8273			SOOHOO, TONY GLEN	
			ART UNIT	PAPER NUMBER
			1723	

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

11

Office Action Summary	Application No.	Applicant(s)	
	10/618,384	COODY ET AL.	
	Examiner	Art Unit	
	Tony G. Soohoo	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/03 total 4pgs.</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-8, drawn to a method of hydrating particulate polymer, classified in class 366, subclass 348.
 - II. Claims 9-21 and 23 drawn to an apparatus for hydrating powder with pre-wetter high energy mixer and blender, classified in class 366, subclass 154.1.
 - III. Claims 22 and 23 drawn to an apparatus for hydrating power with eductor, classified in class 366, subclass 163.2.

Claim 23 links apparatus claims II and III together.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions Group I and Groups II/III are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus may be used to perform a materially different process such as mixing cement powder to make a cement slurry or create paper pulp.
3. Inventions II and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In

the instant case the different inventions each may operate independently from one another and operate with a different effect of pre-wetting the particulate or exclusively moves the material with an eductor without pre-wetting the material to a mixer and blender.

4. During a telephone conversation with D Sullivan on 5-19-2005 a provisional election was made WITHOUT traverse to prosecute the invention of Group II, claims 9-21 and linking a claim 23. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-8, and 22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "118" has been used to designate both the anti-bridging cone and knife shut off valve. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

Therefore, the cupped surfaces of claim 17, and the holes in the vanes of claim 18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The disclosure is objected to because of the following informalities: the specification uses the same number 118 for two different elements of the anti-bridging cone and the knife shut-off valve.

Appropriate correction is required.

Claim interpretation

8. Claim 9 recites a series of components comprising the hydration unit without any connective structure or order of connection with the pre-wetter, high-energy mixer and blender.

9. Claim 11 recites two elements without any relative relationship of the tote tanks, anti-bridging cone and knife shut-off valves.

10. Claim 12 points out a receiving rack, (with appears to state a structure of a rack with a function of receiving" further comprising an isolated element vibrator without structural cooperation with the rack or any other element. It is noted that a vibrator commonly does not perform any function of support as in a rack or capable of receiving any material.

11. Claim 15 recites "is configured" and has been considered and afforded weight to being directed to the functional operation of the pre-wetter and does not preclude any structural limitation other than the ability to perform such a flow.

12. Claim 23 has invoked 35 USC 112, 6th paragraph with regards to the means for storing, means for hydrating and means for delivering. It is noted that for examination

Art Unit: 1723

purposes, the recitation of each means has been given the broadest reasonable interpretation in a structural means which is capable to perform the recited function.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 9, 15-18, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable Ricciardi 4077612 in view of Stromberg et al 5195824.

Ricciardi discloses a combination of elements including: a polymer powder storage 12, 10, delivery assembly 18, 28, with a metering auger 14 and a discharge chamber 20, a hydration assembly with a pre-wetter unit 36, 32, 34, with a cyclonic flow pattern, 48, 50, figure 3, high energy mixer with housing 54 and impeller blades 57.

Ricciardi discloses all of the recited subject matter of the combination of elements as defined within the scope of the claims with the exception of having a blender.

The Stromberg (et al) reference discloses that a gelling device may have the combination of elements of a presetting assembly whereby dry powder is introduced via water line 50, and powder line 48 to a pump 40, 42; a high energy mixer blender 36, 38 with an agitator 54, 56, and a weir 34 wall; which is used to function as a pre-gel blender and a blender 100 as a primary blender 18.

In view of the teaching of Stromberg, it is deemed that it would have been obvious to one of ordinary skill in the art to provide substitute for the holding tank 64 of the Ricciardi with the additional element of a primary blender to cooperate with blender tank 64 of Ricciardi so as to permit the tank 64 to act as a pre-gel blender with a primary blender so as to provide a more efficient hydration of the gelling agent.

With regards to claims 17-18, the use of impellers with cupped surfaces and holes in the surfaces are old and well known in order to provide additional shear flow effects. Absent any unexpected result, it is deemed that it would have been obvious to one of ordinary skill in the art to substitute for the impeller of the Ricciardi reference with a cupped agitator vane with holes so as to provide a more effective shear flow produced by the impeller.

15. Claims 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricciardi 4077612 in view of Stromberg et al 5195824 as applied to claim 9 above, and further in view of Mochizuki et al 6161358.

Ricciardi 4077612 in view of Stromberg et al 5195824 discloses all of the recited subject matter as defined within the scope of the claims with the exception of hopper 12 being a tote tank with a supporting rack.

The reference to Mochizuki (et al) teaches, column 8, lines 10-12, that chemical additives maybe provided in a from of bag, drums or tote tanks to allow modular transportation.

Accordingly, it is deemed that it would have been obvious to one of ordinary skill in the art to modify the hopper 12 with a use of tote tanks to allow modular transportation of material to the system.

16. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricciardi 4077612 in view of Stromberg et al 5195824 further in view of Mochizuki et al 6161358 as applied to claim 10 above, and further in view of Montgomery, Jr. et al 4341492.

Ricciardi 4077612 as modified above discloses all of the recited subject matter as defined within the scope of the claims with the exception a knife valve, anti-bridging cone and pneumatic vibrators.

Montgomery (Jr. et al) teaches that a hopper 26 may be provided with a cone section 28, a pneumatic material vibrator line 24 44 (column 8, lines 30-51) , and knife valve 32 which prevents bridging and plugging of the outlet.

Additionally, with regards to claim 11, the use of anti-bridging cones and knife shut-off valves are respectively old and well known devices to prevent bridging of material in a feed hopper, and to shut off flow from a hopper, as shown by Montgomery above. Absent any unexpected result from the use of the anti-bridging cone or shut of valve, it is deemed that it would have been obvious to one of ordinary skill in the art to provide for the feed system of the Ricciardi reference with the use of anti-bridging cones and knife shut-off valves to prevent bridging of material in a feed hopper, and to shut off flow from a hopper.

With regards to claim 12, it is noted that pneumatic flow vibrators are old and well known devices which cooperate with hoppers to assist the flow of material as it is being dispensed and to prevent bridging. Accordingly, it is deemed that it would have been obvious to one of ordinary skill in the art to provide for the hopper of Ricciardi with such a vibrator to assist in the dispensing of the material to be processed.

17. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ricciardi 4077612 in view of Stromberg et al 5195824 as applied to claim 9 above, and further in view of Monegahan 4138463 .

Ricciardi 4077612 in view of Stromberg et al 5195824 discloses all of the recited subject matter as defined within the scope of the claims with the exception of and additional collection chamber and a flexible transfer auger from the metering auger.

The reference to Ricciardi teaches only a single metering auger which is fed to a discharge chamber 20 leading to the pre-wetter.

The reference to Moneghan teaches that a container with materials 10 and a metering finger 20 may feed into a collection chamber 38 which is further fed to a flexible transfer auger feed screw 22, 40 which leads to a discharge chamber hopper 48.

Thus the Moneghan reference teaches to a person having ordinary skill in the art that one may provide additional chambers and augers, including a flexible auger, in the transport of material to a final feed section.

Absent any unexpected results, it is deemed that it would have been obvious to one of ordinary skill in the art to provide for the device of Ricciardi with additional chambers and augers, including a flexible auger so as to provide a further transport of material in various locations prior to feed into the pre-wetter so that the material supply does not have to be adjacent the prewetter.

18. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ricciardi 4077612 in view of Stromberg et al 5195824 as applied to claim 9 above, and further in view of Weber et al 4451155.

Ricciardi 4077612 in view of Stromberg et al 5195824 discloses all of the recited subject matter as defined within the scope of the claims with the exception of the blender having one or more blender discs.

The reference to Weber et al 4451155 discloses a mixing tank with a blender assembly comprising discs for agitation of the material fluid. Absent any unexpected result, it is deemed that it would have been obvious to one of ordinary skill in the art to substitute device of Ricciardi as modified by Stromberg with an blender tank of the type as shown by the Weber (et al) reference including the blender discs so as to provide a more effective agitation of the fluid.

19. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ricciardi 4077612 in view of Stromberg et al 5195824 as applied to claim 9 above, and further in view of Mian 4141656.

Ricciardi 4077612 in view of Stromberg et al 5195824 discloses all of the recited subject matter as defined within the scope of the claims with the exception of the a weir having steps

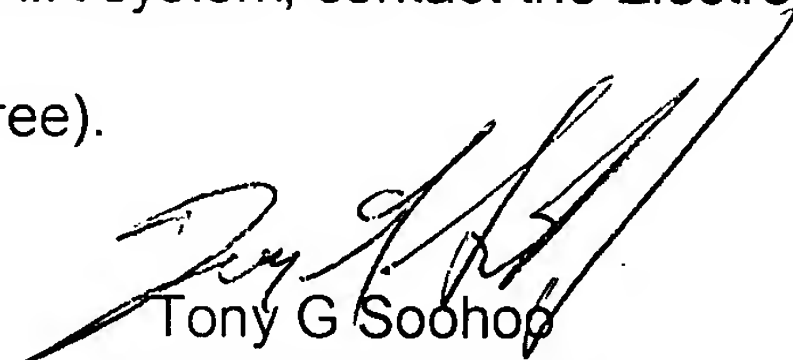
The reference to Mian 4141656 discloses a mixing tank 31 with a pre-wetter 13 and weir tanks with steps 35, 37, 47 located downstream from the mixing tank so as to permit proper aging of the material. Absent any unexpected result, it is deemed that it would have been obvious to one of ordinary skill in the art further provide for the device of Ricciardi as modified by Stromberg with a weir tank of the type as shown by the Mian reference so as to provide a more effective aging of the fluid.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony G. Soohoo whose telephone number is (571) 272 1147. The examiner can normally be reached on 7:00 AM - 5:00 PM, Tues. - Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tony G Soohop
Primary Examiner
Art Unit 1723
